photodiode.

8. The photodetector of claim 1, wherein the third region is operable to maintain a stable quiescent voltage during operation of the photodetector.

9. The photodetector of claim 1, wherein the first region is operable to maintain a same the stable quiescent voltage during operation of the photodetector as the third region.

10. The photodetector of claim 1, wherein the first conductivity type is N-type and the second conductivity type is P-type.

11. The photodetector of claim 2, wherein the well and the first region form a junction of the photodiode.

12. An apparatus, comprising:

a substrate of a first conductivity type;

a transistor including a channel region of the first conductivity type and a first region of a second conductivity type disposed over the substrate, the first region serving as a source region of the transistor; and

a photodiode including the first region, a second region of the first conductivity disposed over the first region and a third region of the second conductivity type disposed over the first region and spaced from the channel region.

13. The apparatus of claim 12, wherein the substrate and the second region are connected to a low reference voltage of the apparatus.

14. The apparatus of claim 12, wherein the transistor is a precharge transistor.

15. The apparatus of claim 14, wherein the precharge transistor is a CMOS transistor.

16. The apparatus of claim 14, wherein the apparatus further comprises:

a control transistor having a gate connected to the third region, a first terminal connected to a supply voltage and a second terminal; and

a read transistor having a gate connected to an input signal, a third terminal connected to the second terminal, and a fourth terminal connected to processing circuitry.

17. The apparatus of claim 16, wherein each of the read transistor, control transistor and the precharge transistor is a CMOS transistor.

18. The apparatus of claim 16, further comprising:

a metallization over the third region that connects the third region to the gate of the control transistor.

19. The apparatus of claim 12, wherein the third region is spaced from the second region.

20. The apparatus of claim 12, wherein the second region is more heavily doped than the substrate.

21. The apparatus of claim 12, wherein the third region is more heavily doped than the first region.

22. The apparatus of claim 12, further comprising:

a well of the first conductivity type, in which the first region is formed.

23. The apparatus of claim 22, wherein a junction of the well and the first region forms a junction of the photodiode.

24. The apparatus of claim 22, wherein the well is more heavily doped than the substrate.

25. The apparatus of claim 24, wherein the second region is more heavily doped than the well.

26. The apparatus of claim 12, wherein a junction of the first region and the substrate forms a junction of the photodiode.

27. The apparatus of claim 12, wherein the photodiode is a fully-depleted-channel type of photodiode.

28. The apparatus of claim 12, wherein the third region is operable to maintain a stable quiescent voltage during operation of the apparatus.

29. The apparatus of claim 28, wherein the first region is operable to maintain a same stable quiescent voltage during operation of the apparatus as the third region.

30. The apparatus of claim 12, wherein the first conductivity type is N-type and the second conductivity type is P-type.

31. The apparatus of claim 12, wherein the first conductivity type is P-type and the second conductivity type is N-type.

32. A method of operating a photodetector including a photodiode of a fully-depleted-channel type and a precharge transistor having a source region that serves as a cathode of the photodiode, the method comprising:

accumulating photogenerated charges within the photodiode; and

outputting to a processing circuit a first linear signal corresponding to the accumulated photogenerated charges.

33. The method of claim 32, wherein the step of outputting includes:

outputting from the photodiode a second linear signal representing the